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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,950	09/21/2000	Yoshiyuki Sogawa	32405W041	9479

7590 02/13/2004

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EXAMINER

SELBY, GEVELL V

ART UNIT PAPER NUMBER

2615

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/665,950

Applicant(s)

SOGAWA ET AL.

Examiner

Gevell Selby

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 11-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10 is/are rejected.
- 7) ☒ Claim(s) 8,9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Claims 11-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanigawa et al., US 5,915,033.**

In regard to claim 4, Tanigawa et al., US 5,915,033, discloses a test method for examining a shooting direction of a camera apparatus attached to a body of a vehicle (see column 1, lines 23-39) , comprising:

obtaining a photographed image by photographing with said camera apparatus a test chart placed at a predefined position ahead of the vehicle with a reference pattern drawn on the test chart (see column 2 lines 57, 58 and column 3, lines 15-17);

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[The test chart is placed in front of the camera that faces the rear of the vehicle in the example given in the reference. In the case where the car is in reverse, the test chart is ahead of the vehicle. It is also inherent the cameras can be placed facing the front of the vehicle wherein the test chart is also in ahead of the vehicle.]

determining a position of said reference pattern on said photographed image (see column 3, lines (17-19); and

judging on compliance or non-compliance of the shooting direction of said camera apparatus based on a relationship between the position of said reference pattern determined and a proper range defining a range appropriate for the shooting direction of said camera apparatus (see column 3, lines 20-24 and column 9, lines 42-49).

3. Claims 1, 2, 7 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamaguri, US 6,462,777.

In regard to claim 1, Hamaguri, US 6,462,777, discloses a test method for examining a shooting direction of a camera apparatus, comprising:

obtaining a photographed image by photographing with said camera apparatus a test chart placed at a predefined position ahead of said camera apparatus with a reference pattern drawn on the test chart (see column 5, lines 59-64);

setting a judgment pattern at a specific position on said photographed image(see column 6, lines 1-9);

displaying said photographed image on a display device (see column 5, lines 50, 64); and

comparing a position of said reference pattern and a position of said judgment pattern on said displayed photographed image (column 6, lines 10-15).

In regard to claim 2, Hamaguri, US 6,462,777, discloses the test method for examining the shooting direction of the onboard camera apparatus according to claim 1, wherein said judgment pattern having at least one judgment reference line extending in a horizontal direction and at least one judgment reference line extending in a vertical direction is set on said photographed image in said setting step (see figure 2, and column 6, lines 1-6).

In regard to claim 7, Hamaguri, US 6,462,777, discloses the test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said reference pattern is at least one of a crisscross pattern and a rectangular pattern. (see figure 2, and column 6, lines 1-6)

In regard to claim 10, Hamaguri, US 6,462,777, discloses the test method for examining the shooting direction of the onboard camera apparatus according to claim 1, wherein said camera apparatus is a stereo camera apparatus having a pair of cameras, and said photographed image is an image photographed by one of said cameras (see column 5, lines 59-61).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Hamaguri, US 6,462,777, as applied to claim 1, in view of Schofield et al., US 6,222,447.

In regard to claim 3, Hamaguri, US 6,462,777, discloses the test method for examining the shooting direction of the camera apparatus according to claim 1, but lacks wherein said photographed image is displayed on a navigation display provided in a navigation device in said displaying step.

Schofield et al., US 6,222,447, discloses a rearview vision system for a vehicle the has a navigational display which guides the driver in a parking space (see column 10, lines 29-56).

It would have been obvious to a person skilled in the art, at the time of invention to modify Hamaguri, US 6,462,777 in view of Schofield et al., US 6,222,447, to have the navigational display instead to the CRT display in order to inspect the display screen as taught by Fujii (see column 3, lines 20-24).

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanigawa et al., US 5,915,033, as applied to claim 4, in view of Tomitaka, US 5,355, 163.

In regard to claim 5, Tanigawa et al., US 5,915,033, discloses the test method for examining the shooting direction of the onboard camera apparatus according to claim 4, but lacks wherein said determining step includes:

evaluating a correlation of each of specific regions in said photographed image with a previously prepared specific brightness characteristics pattern; and

specifying a position of one of said regions having the greatest correlation as the position of said reference pattern; wherein said brightness characteristics pattern has the same brightness characteristics as said reference pattern shown on said photographed image.

Tomitaka, US 5,355, 163, discloses a test method for a video camera system wherein said determining step includes:

evaluating a correlation of each of specific regions in said photographed image with a previously prepared specific brightness characteristics pattern (see column 2, lines 35-46); and

specifying a position of one of said regions having the greatest correlation as the position of said reference pattern; wherein said brightness characteristics pattern has the same brightness characteristics as said reference pattern shown on said photographed image (see column 2, lines 47-58).

It would have been obvious to a person skilled in the art, at the time of invention, to modify Tanigawa et al., US 5,915,033, in view of Tomitaka, US 5,355, 163, to have the determining step include;

evaluating a correlation of each of specific regions in said photographed image with a previously prepared specific brightness characteristics pattern; and

specifying a position of one of said regions having the greatest correlation as the position of said reference pattern; wherein said brightness characteristics pattern has the same brightness characteristics as said reference pattern shown on said photographed image,

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in order to stably and effectively pickup a quantity of features of the object in the visual field (See column 2, lines 17-19) and determine the section of the image with the highest similarity to reference (see column 2, lines 50-52) as taught by Tomitaka.

In regard to claim 6, Tanigawa et al., US 5,915,033, in view of Tomitaka, US 5,355, 163, as described in regard to claim 5 above, discloses the test method for examining the shooting direction of the onboard camera apparatus according to claim 5, wherein said determining step includes evaluating the correlation with said brightness characteristics pattern by searching through a specific search range (see Tomitaka: figure 7, elements FMX1 to FMX3 and column 2, lines 33-35) within said photographed image (PIC), wherein a setting position of said search range is determined based on the position of said reference pattern shown on said photographed image under conditions where said camera apparatus is properly mounted (see column 6, lines 35-57), and an area of said search range is set in consideration of a deviation of the shooting direction of said camera apparatus (see column 3, lines 20-29).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanigawa et al., US 5,915,033, as applied to claim 4, in view of Takano et al., EP 691,599.

In regard to claim 8, Tomitaka, US 5,355, 163, does not notify an examiner of information concerning adjustment of the mounting or the amount of deviation from the reference pattern.

Tankano et al., EP 691,599 discloses a test method for examining shooting direction comprising:

notifying an examiner of information concerning current mounting conditions of said camera apparatus or information concerning adjustment of the mounting of said camera apparatus according to the amount of deviation of said reference pattern when said reference pattern deviates from said proper range (see column 2, lines 40-53).

It would have been obvious to a person skilled in the art at the time of invention to modify Tanigawa et al., US 5,915,033 in view of Takano et al., EP 691,599, to notifying an examiner of information concerning current mounting conditions of said camera apparatus or information concerning adjustment of the mounting of said camera apparatus according to the amount of deviation of said reference pattern when said reference pattern deviates from said proper range in order to prevent erroneous decision based on inappropriate information from because the position of the image sensor has changed over time due to vibration or the like (see Takano: column 2, lines 8-13.)

Allowable Subject Matter

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to claim 9, Tanigawa et al., US 5,915,033, in view of Takano et al., EP 691,599, mentions notifying the user by alarm or the like, or correcting the position automatically, or correct the image data (see Tankano: column 2, lines 50-53), but it does

not mention selecting a mounting member having a shape for minimizing the of deviation from the reference pattern by notifying the examiner of the selected mounting member.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses camera systems with image correction methods:

US 6,377,701,

US 6,377,701,

US 6,373,518,

US 6,385,334,

US 6,020,919,

US 5,159,436,

US 5,175,616.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Vu Le can be reached on 703-308-6613. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

gvs


VU LE
PRIMARY EXAMINER